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Profitability Analysis in the Egyptian Banking Sector

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Abstract

The paper is analyzing current problems of the Egyptian banking sector, which is dominated by public banks. The reported problems include a massive proportion of non-performing loans in the banks' credit portfolios as well as significant profitability problems, especially in the public banks. Some empirical data is gathered using a bank-specific Return on Equity-Analysis. Results support the reported problems and also show some structural weaknesses of both public and private banks.

JEL classification

G21; G32; O16

Keywords

Privatization; non-performing loans; return on equity analysis; banks; Egypt

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1 Introduction

Usually, a well-established, trustworthy, and profitable banking system is one of the key success factors of economic development. Egypt has witnessed a strong economic growth during the recent years, but reports and information about the Egyptian banks did not show the before mentioned attributes. Weak supervision, problems with non-performing loans, and dominant, inefficient and unprofitable public banks got much more attention in the public discussion. However, the empirical evidence of these problems seems to be missing so far.

In this paper, a Return on Equity analysis is used to show whether the mentioned effects can be recognized within the banking sector, using a small sample of public and private banks. A ROE analysis is an easy to use standard tool for management control in banks, especially if more sophisticated ones are not available or not applicable. The analysis in this paper shows significant differences between public and private banks, in terms of profitability as well as in some structural elements, but also some similarities between both groups. The main results are that there are indeed some serious profitability problems in the public banks, mainly caused by low income and high loan loss provisions. A structural problem within the balance sheet structure of all analyzed banks can be also be recognized, indicating that risk avoidance seems to be the main approach in credit risk management for the analyzed sample.

The paper is organized in four chapters. The first chapter provides a short overview about the current economic situation in Egypt and the status of the financial markets. The status quo of the Banking sector is described in the second chapter. The Return on Equity scheme used to analyze the banks is introduced in chapter three, followed by the analysis and the results in chapter four.

2 Egyptian Economic Situation and Financial Markets: An Overview

After the collapse of oil prices in the mid-1980s, Egypt engaged more vigorously in a process of structural reform in an attempt to increase the importance of the private sector, the market and international trade in the economy. Since then Egypt's growth performance has varied from a decline phase in the latter half of the 1980s, to acceleration through much of the 1990s, followed by another decline during 1999-2003. (Dobronogov and Iqbal, 2005)

Dobrongov and Iqbal (2005) discussed the economic growth in Egypt discussed the economic growth in Egypt, stating that the country has passed through five phases of economic development:

- Phase one started in 1961 and lasted until the end of 1973, when the Egyptian economy faced low growth. During this period the share of the private sector in GDP was low, and the state dominated the economy. Egypt invested heavily in public infrastructure and social services, but could not sustain high economic growth.
- During the second phase (1974 - 1985) the economy grew strongly. This was basically due to two main factors; the first of which was the launch of the open door policy (*Infitah*), which allowed a greater role for the private sector, saw a partial liberalization of the trade sector, and the introduction of a new exchange rate regime. Second, national income had dramatically increased as a result of the Suez Canal revenues and petroleum exports. Moreover, during that period there was a rapid growth in tourism revenues and worker's remittances. (Dobronogov and Iqbal, 2005). However, despite contributing to the GDP growth the aforementioned revenues from the Suez Canal and petroleum caused some deterioration of fiscal institutions. In other words, the government's current expenditures dominated by a huge wage bill, subsidy, and interest payments, rose even faster than its revenues. In addition there was an increase in inflation to about 15%.
- Throughout phase three (1986 - 1991), the economy again exhibited a slow growth The collapse in windfall revenues following the 1985 – 86 oil price crash revealed the unsustainability of prevailing fiscal policy as fiscal deficits averaged about 15% of GDP throughout this phase. The deficits were accommodated through expansionary monetary policy, which resulted in inflation rates above 20%. Stagnation of exports and large current account deficits endangered Egypt's ability to service its foreign loans.
- During the fourth phase (1992 - 1998) the economy witnessed high growth. In 1992 Egypt launched a successful stabilization effort, resulting in a decline in the fiscal deficit from 15% to 1.3% of GDP as well as a turn down in inflation levels over the next four years. The government also launched a major privatization effort, which resulted in about one third of all state-owned enterprise assets being privatized between 1991 and 1998. The stock market began to grow rapidly during that period as well.
- The fifth phase (1999-2003) was gain characterized by weaker growth. This phase witnessed several shocks, including the Luxor terrorist attack in 1997, the global financial crisis of 1997-99, and a domestic financial scandal in 1998-99 (bad loans

scandal). All these events had severe consequences; they in particular affected the growth of credit to the private sector. Negative events shocks continued during this phase, when the world witnessed the September 11 attack in 2001, and the invasion of Iraq in 2003. The Egyptian government reacted to the initial shocks by expansionary fiscal policy. Only later, monetary policy was eased. The increase in money supply during 2001-03 did not help to increase investment, as a result of the diluted confidence in the banking system caused by the financial scandal. In 2001, the stock market collapsed. The government also tightened exchange rate controls, which resulted in the reappearance of the black market premium.

Looking back at those phases, it can be recognized that when the Egyptian government started privatization in all sectors – though at different stages – the economy improved.

The picture changed when the new cabinet headed by Dr. Ahmed Nazif took charge in July 2004. The stock market started rallying. The new government strives to diversify the economic base from traditional sources of revenues (tourism and Suez Canal) to oil and gas income and other exports' revenues. Furthermore, in an attempt to revive the Egyptian economy and overcome the slow-down in the preceding years, the new government adopted a number of policies. It cut some tariffs and introduced some price adjustments; along with passing the new Income Tax Law. It even extended to reducing some of the main subsidies, such as that for fuel. Efforts also continued to maintain the exchange rate stability. (CBE 2004/2005, 71)

In December 2004 Egypt, in a renewed commitment to free trade, foreign investment and regional economic cooperation, signed a Qualified Industrial Zones (QIZs) protocol with both Israel and the United States, which is seen as a step towards the signing of a free trade agreement (FTA) with the United States. Despite being opposed by some political parties, the QIZs, by allowing duty-free access to US markets, have contributed to the growth in the textiles sector. Supported by to a favorable development in key sectors (gas, textiles and tourism) exports of goods and services grew faster in 2005 and are expected to continue on that track. (Business Monitor International 2006, 42)

The upturn economic cycle activated by improved business climate and consumer confidence was confirmed by the accelerated GDP growth rate in 1H05/06. Such growth resulted into higher per capita GDP which increased by 3% compared to 2% in 2003/04. On the back of the new income tax law, further boost is expected. (El Husseiny and Mansour 2006, 11)

The privatization program picked up speed during this period, with privatization proceeds reaching 5.6bn EGP in 2004/05 compared to 542m EGP in 2003/04 through the sale of 16 state-owned firms, land, and 12 joint ventures. Of the most significant privatization moves, was the sale of 30% of Suez Cement Co., the largest cement producer, the 20% floatation of shares of AMOC and SIDPEC, the energy sector's key players, and that of Telecom Egypt, Egypt's sole fixed-line provider. (El Husseiny and Mansour 2006, 13)

During 2004/2005, a number of regulations concerning the stock exchange were issued. These were to amend some provisions of the law of joint stock companies, partnerships, limited by shares, and limited liability companies, and its executive regulations. One very crucial development was completing the electronic link between the Stock Exchange and Misr for Clearing, Settlement and Central Depositary (MCSD) in order to activate the market performance and ensure the timeliness and accuracy of the exchange of data and information. (CBE 2004/2005, 96)

After witnessing two years of strong gains (2004-2005), the Egyptian stock market reversed its upward trend mid-February 2006, dropping to around 40% of it former high since then. The liberalisation and growth attracted and was fuelled by a new type of investor, who saw the stock market as an opportunity to make a quick pound. This new class of investors added volatility and a certain degree of irrationality to the market. Moreover, the volatility and meltdown induced many investors to get out of the market as quickly as possible, even at a loss. In addition, the flow of IPOs of SIDPEC, AMOC and Telecom Egypt in addition to many capital increases of listed companies in the Egyptian stock market drained liquidity from the market, driving stock prices down, despite attracting a huge number of investors and contributing to the bull market. (El Husseiny and Mansour 2006, 15 – 16) However, mid-2006 the stock market recovered and reached its previous 2006 peak again. So while the overall stock market performance is impressive, the market capitalization is still low. The major stock market index, the CASE 30, represents the strongest 30 stocks listed on the Cairo and Alexandria Stock Exchange (CASE). Market capitalization reached EUR 113m., representing only 0.2% of the GDP. In Germany the market capitalization of the DAX 30 equals more than 30% of the GDP. In addition, Egypt neither has a vivid secondary market for bonds nor a market for derivatives.

3 Status Quo of the Egyptian Banking Sector

The Egyptian banking sector faced serious problems in the recent years. These problems are recognized, and the appointment of a new governor of the Central Bank of Egypt (CBE) in December 2003 and a new cabinet and prime minister in 2004 helped in activating the long awaited banking reform program promising a brighter future for Egyptian banks. Economic growth is massively reduced because of very limited access to even basic financial services. In 2006 less than 10% of the population had has a bank account (Business Monitor International 2006, 24). This is not only a matter of creditworthiness, but also of connections and relationships with key banking sector and finance ministry officials, as the Egyptian banking sector has been dominated by the public banks since years. (Dobronogov and Iqbal, 2005, 18)

The very strong public banks are the second problem. The guaranteed income for the government-owned banks, which strongly invest in government securities with short maturity, reduces the banks' incentive to develop the capacity to serve small and medium private enterprises, which normally are the backbone of any economy and need access to banking products as much as big businesses. Furthermore, a main factor that stimulates non-performing loans in Egypt would be the legal deficiencies that cause collaterals to be an uncertain guarantee. Needless to say that collateral-based lending is dominant in Egypt, with about 92% of loan transactions requiring collateral.

The third major problem is the large number of non-performing loans (NPL). The Egyptian banking sector has long suffered from the accumulation of non-performing loans which reached its peak in the late 1990s. In 2006, bad debts were estimated to constitute at least 20% of the total loan portfolio (Business Monitor International 2006, 23; The Economist Intelligence Unit 2005, 4). One major issue has been corruption in the lending activities, as loans were given based on intentionally overvalued assets to fit the collateral base of each bank and disregarding future cash flows of the borrowers. This problem is the result of weak supervision by the CBE. On the other hand, public banks were used to lend state-owned companies because the government basically ordered them to do so. In 2004, more than 30bn EGP was owed by public enterprises to the four state owned banks. This contributed to deepening of the NPL problem.

As a result, the Egyptian government started taking drastic actions towards banks facing increasing NPLs, including both public and non-public banks. Later, the banking reform program was set to tackle a further deteriorating situation. Oldham and Benaddi (2005) identified

main elements to the government's reform of the banking sector, namely capital requirements, restructuring and privatizing of public banks, and strengthening the banking supervision.

- The first element would be raising the minimum capital requirement for banks.

  The CBE and the GOE drafted a new banking sector law (Law No. 88/2003), which has been effective since July 2003. The new law requires a minimum capital requirement of EGP 500 million for domestic banks and USD 50 million for branches of foreign banks. Moreover, banks should abide by a 10% risk-weighted capital adequacy ratio. (American Chamber of Commerce 2005, 14). Many banks were forced into mergers and acquisitions to meet the final deadline (July 14, 2005) for maintaining the new capital requirements.

- The second element is represented in the administrative and financial restructuring of the public sector banks. This is strongly related to a third element, namely privatizing the big-public sector banks and divesting their stakes in joint ventures with foreign banks.

  Egypt's public sector banks granted subsidized loans (interest rates below market rates for refinancing) to help of developing a certain industry or sector. Thus state-owned banks are sentenced to perform below market average. Despite the fact that the government would lose an important policy instrument, privatisation is pushed. Perhaps Egypt's government hopes to profit from privatisation in another was, i.e., by to collecting windfalls from their stakes to foreign banks and increasing, increase competition and thus higher tax revenues. Privatisation also promotes, promote economic efficiency in general (American Chamber of Commerce 2005, 4)

  The privatization program for banks was first announced within the five year plan 1992/93-97/98. The Commercial International Bank (CIB-Egypt) acted as), being a pioneer by issuingissued an Initial Public Offering (IPO) of 57% of its shares in 1993. Subsequently, in 1996, the National Bank of Egypt, the bank's primary shareholder set the first listing for an Egyptian institution on the London Stock Exchange by selling an additional 20% equity stake through Global Depositary Receipts (GDR) (www.cibeg.com).

  Heading towards an improved banking sector, public sector banks started divesting their stakes in joint ventures where shareholdings of 13 out of 17 banks were sold according to the CBE Annual Report *(2005/06)*. The most single important privatization

was the sale of an 80% stake of Bank of Alexandria (BoA); Egypt's fourth biggest state-owned bank, to Italy's Sanpaolo IMI Group for USD 1.61 billion; (EGP 9.2 billion), on October 17, 2006 (CBE 2005/2006, 23 – 24). The governments eagerness to push privatisation can be gauged from the fact, that, they the spent over EGP 8 billion to prepare the bank for privatization of which EGP 6.9 billion were used to settle its loan portfolio in 2006. EGP 450 million were assigned to early retirement packages (Daily Star 28th March 2007*)*. For the privatization of Banque du Caire, the country's third largest public bank, the government expects revenues of USD 2.4 billion. A huge proportion (more than 80%) of that amount will be needed to cover the non performing loans which are estimated to be more than EGP 20 billion (USD 3.6 billion). (bfai 2007)

- The fourth element is strengthening of regulatory supervision by the CBE.

  In an attempt to manage a successful banking reform program, the CBE had to beef up its supervisory role to cope with the latest international standards. Accordingly, the CBE adopted a supervisory method based on evaluation of risks and assessment of the Egyptian Banks' abilities to identify current and future risks, as part of efficiently managing their risk (CBE 2004/2005, 30). It is worth mentioning, that the CBE has complied with most of the Basel Accord Principles for effective banking supervision. (American Chamber of Commerce 2005, 16)

  Pursuant to the CBE decision No. 2119, a "non-performing loans monitoring unit" was established at the CBE, assigned to ensure the activation of such units at public and private sector banks. This unit aims at establishing an updated data base of the banks' problem customers and helps in arranging collective settlements. (CBE 2004/2005, 36)

  On a different note, according to the Daily Star (23rd February, 2007,) the Minister of Investment, Dr. Mahmoud Mohieddin announced that the government is to settle the remaining EGP 10 billion in public company debt by June 2008. Public company debt was equivalent to EGP 31.5 billion in June, 2004, of which EGP 28.5 billion was owed to public banks. Before the sale of Bank of Alexandria, the Government of Egypt (GOE) settled the debts of public companies to the bank, with an amount of EGP 6.9 billion, whereas the EGP 9.2 billion earned from the aforementioned sale is allocated to settle the debts of 54 other companies. (Namatalla, 2007)

The government aimed to scale back the number of banks from about 57 to 22. (Euromoney Institutional Investor PLC 2006, 22) As a first result, the number of banks declined from 57 as of September 2004 to 41 as of May 2007.

In the following section, a ROE analysis will be used to investigate whether the reported problems can be found in the published data, where especially the NPL, problem but also the underperforming public banks might be an issue.

4 Return on Equity as Measure of Bank Profitability

The Return on Equity (ROE) is a profitability ratio usually discussed in the context of financial statement analysis. It is calculated as the net profit (before or after taxes) over the shareholders' (common stock) equity. (Reilly and Brown 2006, 320; Van Horne and Wachowicz 2005, 147 – 148)

$$\text{ROE} = \frac{\text{Net Profit}}{\text{Common Stock Equity}}$$

Since a single ratio is not sufficient the ROE analysis is usually combined with other ratios. One of the most common approaches is the Dupont System of Analysis, where the ROE is expressed as a multiplication of Return on Assets (ROA) and Financial Leverage Multiplier (FLM). The ROA is defined as Net Profit over Total Assets; the FLM is the relation of the firm's total assets to its common stock equity, therefore also being the reciprocal of the equity ratio. It is also called Equity Multiplier (EM). (MacDonald and Koch 2006, 69; Megginson and Smart 2006, 62)

$$\begin{aligned}\text{ROE} &= \text{ROA} \times \text{FLM} \\ &= \frac{\text{Net Profit}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Equity}} \\ &= \frac{\text{Net Profit}}{\text{Equity}}\end{aligned}$$

For a further decomposition of the Return on Assets, an extended or modified Dupont scheme can be used to address a certain industry.

In the management control process for banks, the ROE analysis is a well established tool. It can easily be applied, especially from banks without more sophisticated management control systems, as it is applicable with published data from the financial statements. This advantage also holds for external analysis as applied in this paper. Cole (1972) suggested data decomposition based on a differentiation between income and expenses. This provides an overview

about the different sources of income and expenses, but does not recognize the logical connection between the different categories. Therefore, in the following analysis a different approach is used, based on the suggestions of Schierenbeck (2003). This suggestion uses the most important sources of income:

- Net interest income,
- Commission income,
- Trading income, and
- Other income,

while these categories are expressed as net figures. Net interest income for example will be defined as

$$\text{Interest Income} - \text{Interest Expenses}\,.$$

Important expenditure figures include the general and administrative expenses and depreciation as well as the loan loss provisions.

	Gross Interest Income
–	Interest Expenditures
=	Net Interest Income
+	Commission Income
±	Trading Income
±	Other Income
=	Total Operating Income
–	Total Operating Expenditure
	(1) Personnel Expenditure
	(2) Occupancy Expenditure
=	Gross Operating Profit
–	Provisions for Loan and Lease Losses
=	Net Operating Profit
±	Extraordinary Profit/Loss
=	Net pretax Profit
–	Applicable Taxes
=	Net after-tax Profit

Figure 1: Typical Bank Income Statement

The necessary data can be retrieved from the bank's financial statement. The general content of the income statement is shown in Figure 2, the actual income statements might be, according to the applicable accounting rules, slightly different. To set up a Dupont scheme, the figures from the income statement are usually divided by the total assets or the shareholder's equity. While it is common practice to use average figures, in this paper only the year-end figures are used for simplicity and because the lack of data (no long term time series available).

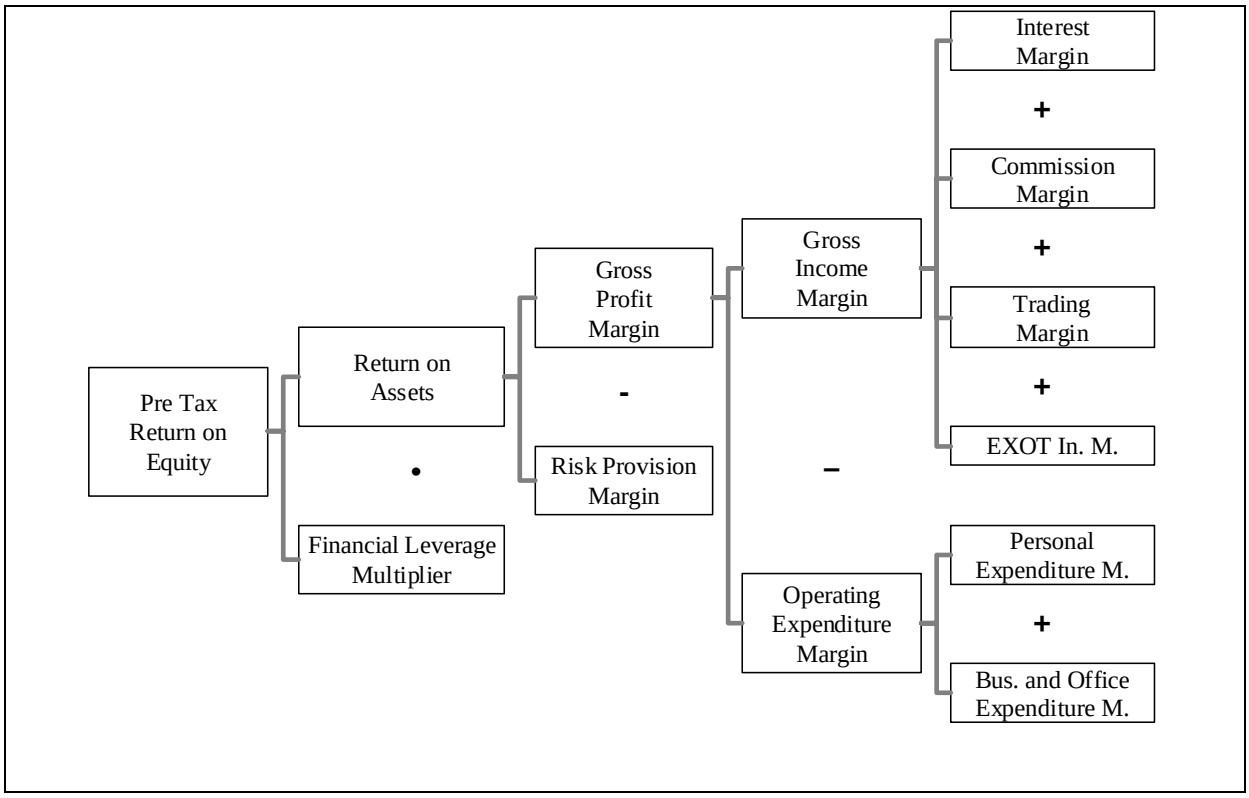

Figure 2: ROE scheme for Banks, Source: Schierenbeck 2004

Organizing the data in a ROE-Scheme will result in the graphical tool as described in Figure 2. The system is organized as follows:

It starts with a decomposition of the income components, where

- IM = Interest Margin = IM =Net Interest Income / Total Assets,
- CM = Commission Margin = CM = Net Commission Income / Total Assets,
- TM = Trading Margin = TM = Net Trading Income / Total Assets, and
- EXOT = Extraordinary and Other Income Margin = Net Extraordinary and Other Income / Total Assets

describe the four major income categories.[1] The sum of the previous four ratios results in the Gross Income Margin GIM. If the

- Operating Expenditure Margin = OEM = Operating Expenditure Margin = Operating Expenditure / Total Assets

is subtracted, the result will be the

- GPM = Gross Profit Margin = Gross Profit / Total Assets.

From the GPM, the

- RPM = Risk Provisions Margin = Risk Provisions of the year / Total Assets

will be deducted to get the

- ROA = Return on Assets = Net Profit / Total Assets.

At this stage, the denominator will be changing from Total Assets to Shareholder's Equity by dividing the ROA by the

- ER = Equity Ratio,

which is, as the Equity Ratio is the reciprocal of the FLM, the same technique that was described above. The result will be the

- ROE bt = Return of Equity before tax = Net Profit / Shareholder's Equity.

The resulting ROE-scheme provides a good insight in the profitability structure of the analyzed banks.

5 The Profitability of Egyptian banks

To get a picture of the profitability situation of the Egyptian banks with reference to the before mentioned problems, the ROE analysis was applied to a selection of banks, with a special focus on the remaining public banks.[2] Sufficient data have been available for the largest public bank, the National Bank of Egypt (NBE), and Banque Misr (BM), the second largest bank. In addition, three private Egyptian banks, the Commercial International Bank (CIB), and the

[1] Extraordinary and Other Income are combined for simplification.

[2] It should be mentioned, that data availability and reliability are major problems when analyzing balance sheets-financial statements in Egypt. For a significant number of banks, necessary data could not be retrieved. Therefore, the selected sample of private banks is not chosen as to be representative for the entire market, but mainly for availability reasons. The sample covers the three years 2003 – 2005, as 2006 data have not been available for all banks at the time of the analysis.

National Societe General Bank (NSGB), being the two biggest private banks in Egypt today, as well as the Arab African International Bank (AAIB), have been analyzed for a comparison. The relative size of those banks can be compared using the figures provided in Table 1**Fehler! Verweisquelle konnte nicht gefunden werden.**. The two public banks represent approximately 38% (23% and 15%) market share, the CIB as biggest Egyptian private bank slightly more than 4% and the remaining two between 2% and 3%. These figures are in terms of total assets, while using loans to customers or customer's deposits give quite similar results.

	Total Assets	Market Share	Loans to Customers	Market Share	Customers' Deposits	Market Share
Market	705,146	100.0%	308,195	100.0%	519,649	100.0%
National Bank of Egypt	160,116	22.7%	74,476	24.2%	134,304	25.8%
Banque Misr	106,854	15.2%	36,552	11.9%	93,184	17.9%
Commercial International Bank	30,390	4.3%	14,393	4.7%	24,870	4.8%
Arab African International Bank	18,952	2.7%	4,558	1.5%	13,849	2.7%
National Societe General Bank	16,695	2.4%	6,779	2.2%	13,104	2.5%

Table 1: Market share of the sample banks, source: CBE, own calculations

The analysis of the key figures is exemplary presented for the NBE data. Figure 3 shows the ROE scheme for NBE for the three consecutive years 2003 – 2005.

- To start with the ROE bt, it shows a constant increase from 6.11% to 6.38% (+ 4.4%), where the absolute number is still very low. As the Equity ratio declined by 14%, the FLM increased by more than 16%. Therefore, the increase in ROE is not a result of higher profitability but due to of a weaker capital structure.
- Another important ratio is the Risk Provision Ratio (RPR), showing the proportion of the gross profit that has been used for loan loss provisions (RPR = RPM / GPM). This ratio is a good indicator for structural problems in the loan portfolio. In the years analyzed, this ratio is quite high for NBE with a peak of more than 80% in 2004. According to this ratio, more than 80% of the gross profit had to be used to cover loan loss provisions. This indicates a significant problem with non performing loans.
- The Cost Income Ratio CIR is a comparison between the gross income and the operating expenditure (CIR = OEM / GIM). It gives an idea about the profitability of the operating business before deducting loan loss provisions. The numbers for the NBE are

competitive at a level of less than 50%. The low operating expenditure costs seem to be the main reason for this advantage.

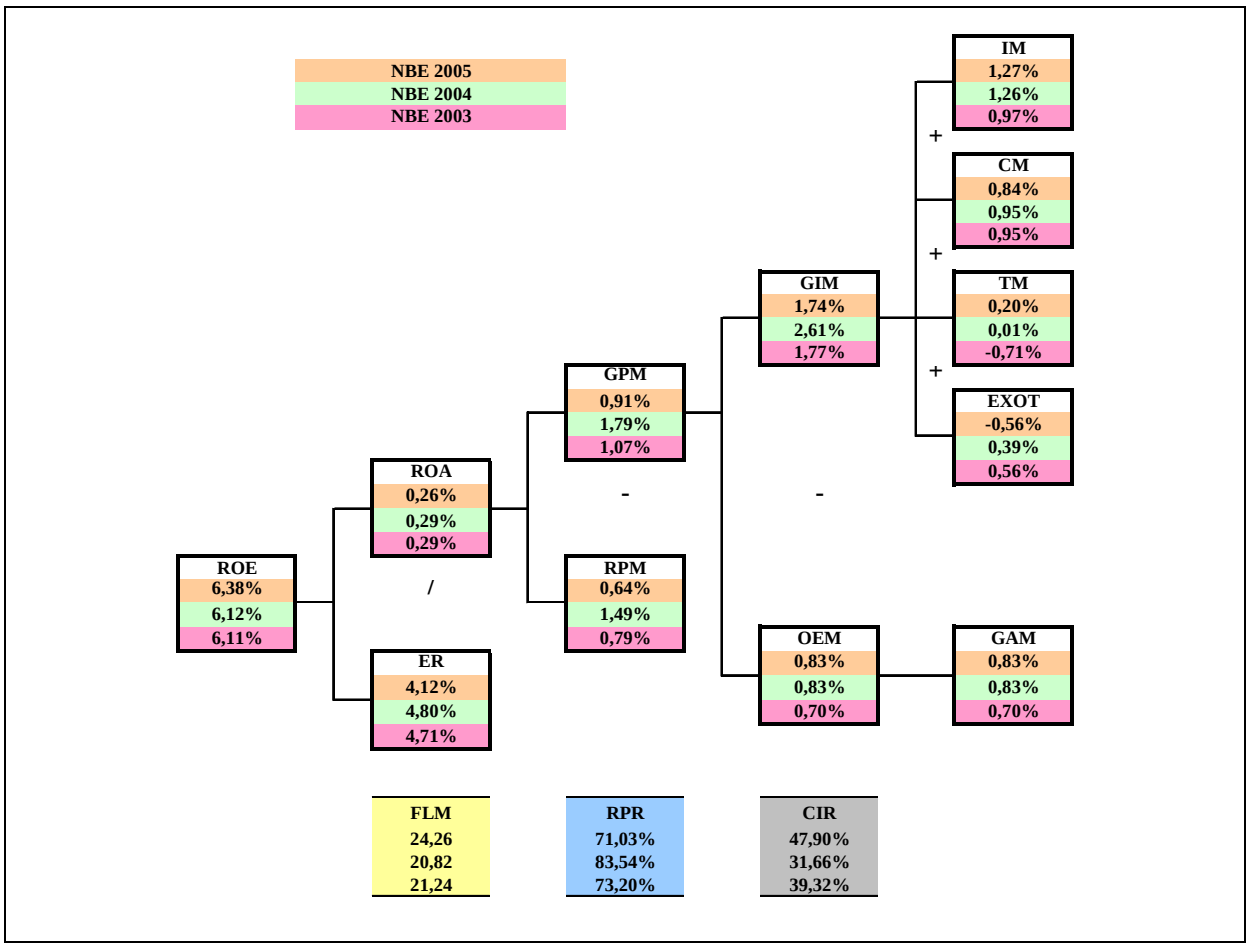

Figure 3: ROE-System for NBE, Source: Financial Statements NBE 2003 – 2005, own calculations

A comparison of some key figures for the sample banks is summarized in the following table. For the second public bank, BM, the situation is quite similar to that of the NBE. The data show a low ROE, combined with high FLM and high RPR, while the CIR is competitive. Compared to the public banks, a significant higher performance of the non-public banks can be recognized. NSGB reaches an ROE bt of more than 40% in 2005, combined with a low FLM, a low RPR, and very competitive CIR. In a certain contrast, the high ROE bt figures of AAIB are accompanied by a sharp increase of the FLM, indicating a weaker capital structure. RPR and CIR are also competitive. The CIB figures show a constant high ROE bt, achieved with a low FLM and a good CIR. On the other hand, the RPR is significantly higher compared to the other private banks.

Bank	BM			CIB		
Ratio/Year	2005	2004	2003	2005	2004	2003
ROE	6,29%	5,54%	5,48%	28,76%	26,58%	26,19%
FLM	30,38	26,58	27,01	14,31	14,70	15,33
RPR	87,08%	85,25%	83,22%	24,39%	30,74%	32,61%
CIR	37,39%	40,08%	40,45%	34,48%	31,04%	30,38%
Bank	AAIB			NSGB		
Ratio/Year	2005	2004	2003	2005	2004	2003
ROE	29,23%	18,83%	11,16%	41,34%	27,74%	31,21%
FLM	19,00	11,68	7,63	12,62	11,84	14,32
RPR	4,81%	6,45%	2,26%	5,30%	31,71%	36,61%
CIR	36,87%	40,48%	49,46%	26,22%	30,13%	28,06%

Table 2: Key figures, Source: Financial Statements, own calculations

As a first result, the analysis clearly indicates a low performance of the public banks, and it also shows that the NPL problem seems to be much more serious for the public banks than for the private ones.

In a next step we will identify some underlying reasons for the significant differences between public and private banks. The different sizes have already been mentioned; the public banks being 3 to 7 times bigger than the analyzed private banks with reference to the total assets. According to the theory of economies of scale, the higher size should be accompanied by a better cost structure and, accordingly, a higher profitability. The CIR can be used as an indicator for these considerations. One would expect a combination of lower costs and higher (or at least comparable) income, resulting in a lower CIR, for the larger banks. A graphical analysis shows that for the sample banks this is not true.

The following Figure 4 depicts the CIR as a combination of its two components, GIM and OEM, shown on the horizontal and the vertical axis. The size of the bubble is representative for the total assets. Instead of being located in the lower right corner, representing low costs and high income, the large public banks are located in the lower left corner, representing low costs and low income. The public banks don’t have a cost, but an income problem.

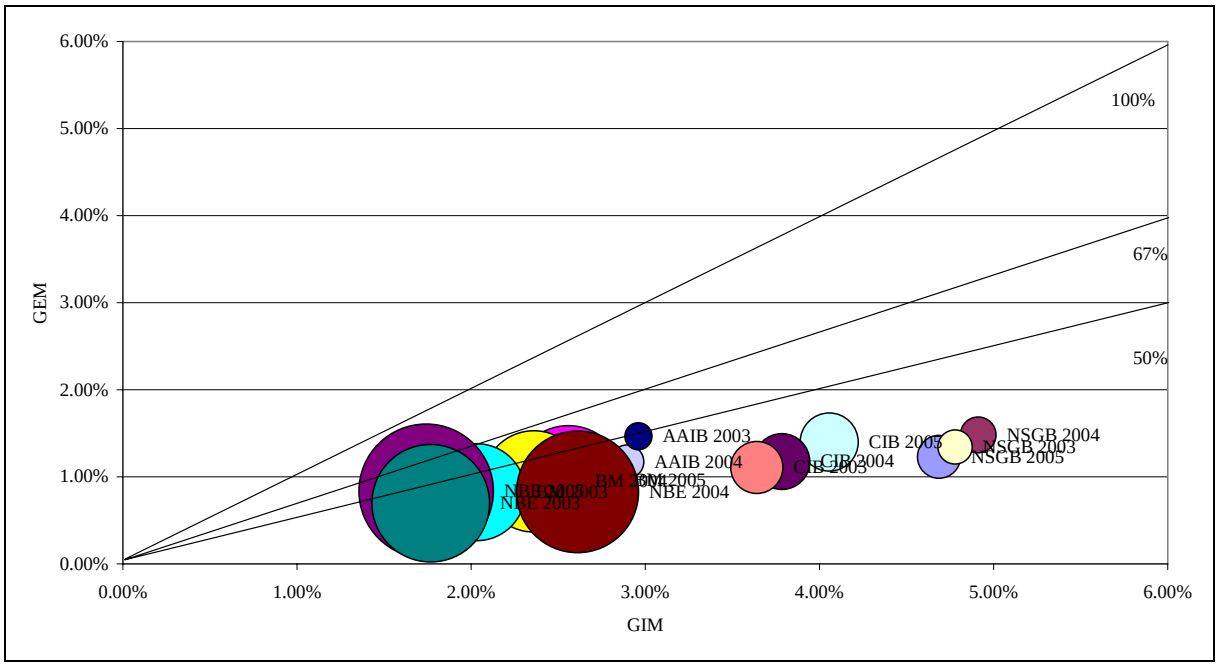

Figure 4: CIR Comparison between the sample banks, Source: own calculations

Usually, the most important income component for a commercial bank is the interest income. A comparison among the sample banks shows that interest income, represented by the IM for 2006, is more than 3% for CIB and NSGB, 1.5% for AAIB, and 1.27% and 1.18% for NBE and BM respectively. The reason for these differences can be identified through a deeper analysis of the interest income. There are basically two sources of interest income: customer related business (loans and deposits) and income from capital market activities (interest on treasuries and dividend payments). Comparing these two components again shows significant differences between the banks. The net income from customer business is negative for the public banks, but also for AAIB, and positive for CIB and NSGB, although with a declining trend (Figure 5). The high (or at least positive) interest margin is mainly driven by a high income from treasuries and dividends. This finding supports the previously mentioned problem of reduced incentives to provide loans to customers as the banks can earn a risk free 9% with government treasuries.

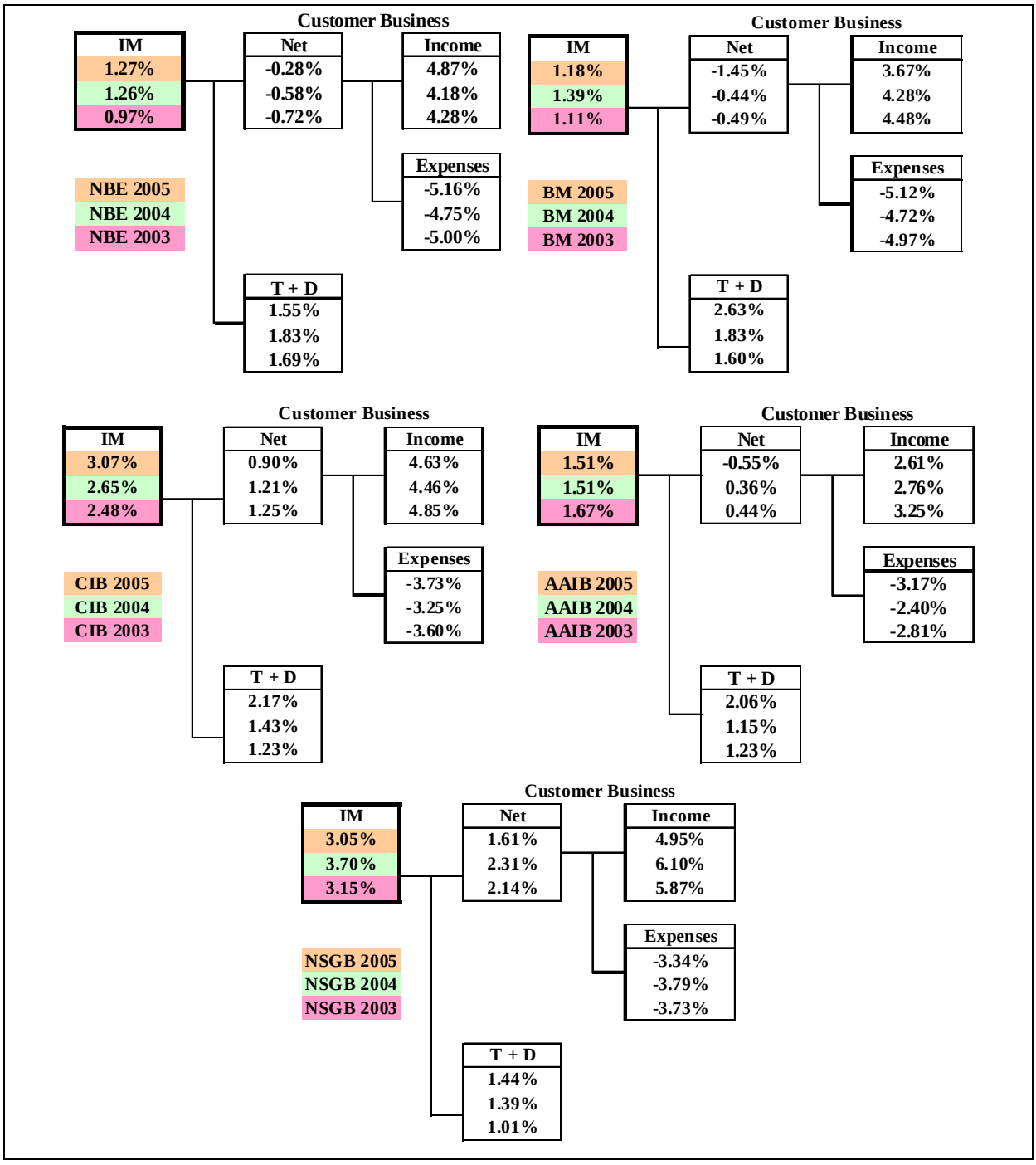

Figure 5: Analysis of Interest Margins, Source: own calculations

One reason for a low or negative net income from customer business might be, but is not necessarily the pricing policy; but as a matter of fact the pricing policy cannot be analyzed with financial statement information as only source. The second important factor is the balance sheet structure. An analysis shows a declining proportion of loans to customers on the total assets since the end of the 1990s, a date previously mentioned as to be the peak of the NPL problem (Figure 6). Within the sample, this proportion is as low as 24% for the AAIB, and for all banks below 50% (Table 3). Reducing the amount of loans to customers, probably to avoid

the default risk, naturally reduces the profit, because the bank doesn't earn the risk premiums. In general risk management, this strategy is known as risk avoidance.

	Loans to Customers/Total Assets	Customers' Deposits/Total Assets
National Bank of Egypt	47%	84%
Banque Misr	34%	87%
Commercial International Bank	47%	82%
Arab African International Bank	24%	73%
National Societe General Bank	41%	78%

Table 3: Balance Sheet Structure 2005, Source: CBE, Financial Statements, own calculations

	Loans to Customers / Total Assets	Customers' Deposits / Total Assets
Private Banks ("Kreditbanken")	39%	39%
Public Banks ("Sparkassen")	60%	63%
Cooperative Banks ("Genossenschaftsbanken")	59%	70%

Table 4: Balance Sheet Structure in Germany 2005, Source: Deutsche Bundesbank, own calculations

On the other hand, within the same time horizon, the proportion of customer's deposits is increasing since the beginning of the 1990s, reaching app. 75% as a nationwide average. The sample banks are all more or less within this range, with higher figures for the public banks (Table 3). With the proportion of loans to customers significantly lower than the proportion of customer's deposits, a negative net income from customer business is not surprising. A comparison to the average figures of the three major banking groups in Germany shows a much more balanced structure (Table 4). This seems to be an Egyptian specialty and may be related to a certain risk aversion caused by the massive problems with non performing loans in the previous years.

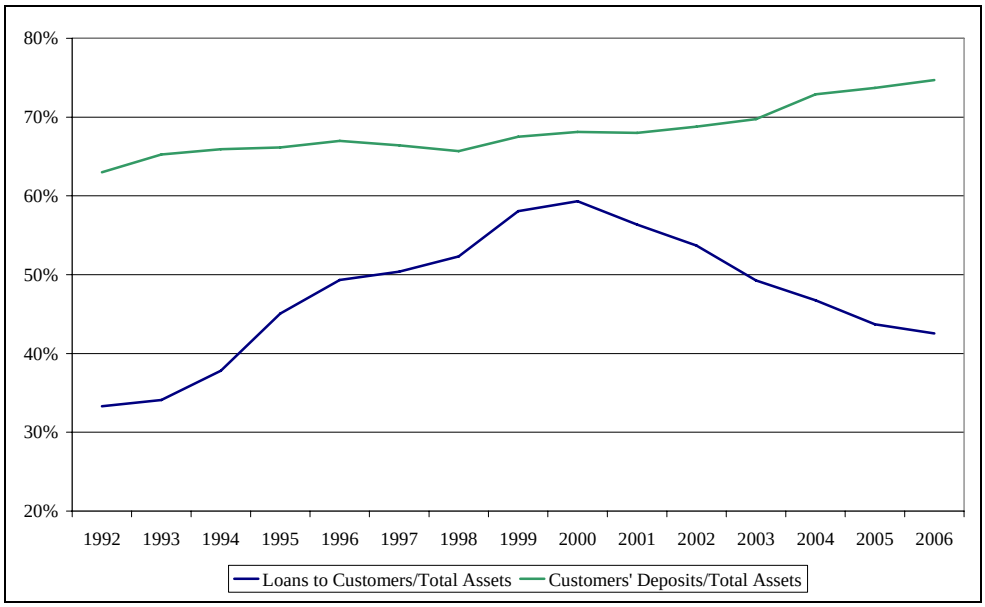

Figure 6: Balance Sheet Structure in the Egyptian Market, Source: CBE, own calculations

6 Conclusion

The general findings support the reported problems within the Egyptian banking sector, especially the non performing loans and the profitability, especially income related problems in public banks. The tool used to analyze this is a bank specific version of the DuPont ROE scheme as suggested by Schierenbeck. Compared to other approaches, it provides a well-organized insight in the profitability structure of a bank, using the published data from the financial statement.

Another interesting result is the general balance sheet structure, which is not characteristic for the public banks alone but also for the private banks. The declining net interest margin from customer business is an indicator for a serious structural problem for the Egyptian banks. Investing in loans is core business for a bank, but it needs sophisticated systems for credit analysis and pricing. Risk avoidance alone might not be the best solution.

More research will be necessary in the future. For example, a broader sample of the market and longer time series might be analyzed, provided that reliable data can be gathered. Furthermore, while the presented analysis focused on interest margin, the risk provisions, and balance sheet structure, future research must include the other sources of income, as they seem to be quite volatile. No analysis has been made concerning the ability and willingness of Egyptian banks to generate income using maturity transformation, but these issues need more information than the published financial statements.

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